

ascertain if an endorsement is present for validation of the document prior to completing the transaction.

5. (Amended) A machine in accordance with Claim 4 further comprising[:] a manually operable acceptor coupled to the processor for the system user to signify acceptance by the user of the data identified as associated with the displayed bounding box.

6. (Amended) A machine in accordance with Claim 1 wherein the processor identifies a courtesy amount recognition (CAR) [line] field and legal amount recognition (LAR) [line] field of the document image; and

based upon the likelihood of a match of the CAR amount relative to the LAR amount provides a validation of the document.

7. (Amended) A machine in accordance with Claim 1 wherein the document is a check and wherein a magnetic ink character recognition [line] field (MICR) is on the check; said machine further comprising[:] a magnetic ink character reader coupled to the processor for magnetically reading that the MICR [line] field region, the processor determining whether a genuine MICR is on the check, the processor further verifying that an account number and a bank number from the MICR [line] field are valid prior to dispensing cash to the system user.

13. (Amended) A machine in accordance with Claim 12 wherein the image from the document [includes] comprises: a user account number printed on the bill; the amount due; and the date of the bill.

14. (Amended) An automated machine for an automated document handling system for dispensing cash to a system user comprising:

July 10, 1998
Card
D2
Cont.
a card receiver for receiving a card having an identification password associated therewith for identifying the user as a qualified user;

a document receiver for receiving a document inserted by user into the machine for which cash is expected to be dispensed;

a document scanner for scanning the document;

a processor coupled to the document scanner for generating a document image;

a display device coupled to the processor to display a scanned image from the document to the machine user;

an entering device coupled to the processor for the system user to enter an amount relative to the document;

wherein the processor interprets a courtesy amount recognition [line] field (CAR) and a legal amount recognition [line] field (LAR) on the document image;

wherein the processor compares the CAR relative to the LAR and the amount entered by the system user relative to the LAR and CAR and provides a confidence level, the confidence level being compared to a threshold to validate the document and to cause a dispensing of cash; and

a cash dispenser coupled to the processor operable after the processor qualifies the user and after the processor validates the document to dispense cash automatically to the system user.

15. (Amended) A system in accordance with Claim 14 wherein the system user provides a biometric [input] identifier to a biometric input device coupled to the processor [and a biometric identifier]; and

the processor evaluates the biometric [identification] identifier from the user against stored biometric data relative to the user to qualify the user prior to dispensing cash to the user.

16. (Amended) A method for automatic banking for dispensing cash to a system user without a teller, [the method] comprising [the steps of]:

providing an automated machine having a card receiver;

inserting a card having an identification password associated therewith identifying the user as a qualified user into the machine;

inserting a document into the machine and scanning the document to produce a [second] document image;

displaying [an] the image from the scanned document to the machine user;

entering by the user into the machine an amount relative to the amount on the document;

reviewing the signature line of the document image for the presence of a signature in order to validate the document; and

dispensing from a cash dispenser in the machine after qualifying the user and validation of document.

17. (Amended) A method in accordance with Claim 16 wherein a MICR amount [line] field appears on the document and [including] further comprising:

reading the MICR amount [line] field and comparing the amount entered by the user to the MICR amount read.

18. (Amended) A method in accordance with Claim 16 [including:] further comprising interpreting an endorsement area of the signature document image to ascertain if an endorsement is present for validation of the document prior to completing the transaction.

19. (Amended) A method in accordance with Claim 18 [including:] further comprising bounding data on the displayed document image and magnifying the displayed data being bounded to fill a display boundary area.

20. (Amended) A method in accordance with Claim 19 [including:] further comprising accepting from the user the bounded data to be processed.

21. (Amended) A method in accordance with Claim 16 [including] further comprising:

interpreting a courtesy amount recognition (CAR) [line] field and legal amount recognition (LAR) [line] field from the [second] document image; and

comparing the CAR relative to the LAR to provide a validation of the document.

22. (Amended) A method in accordance with Claim 16 wherein the document [is] comprises a check and wherein a magnetic ink character recognition [line] field (MICR) is on the check[;], further comprising:

reading and verifying that the MICR [line] field is written in magnetic ink;

reading and verifying an account number and a bank number from the MICR field; and

verifying that the read bank and account numbers are valid prior to dispensing cash to the user.

23. (Amended) A method in accordance with Claim 22 [including:] further comprising prompting the user to perform manipulations on the machine relative to the document being processed.

24. (Amended) A method in accordance with Claim 23 [including:] further comprising selecting the kind of document being processed from a list of several documents, the list being displayed to the user.

25. (Amended) A method in accordance with Claim 23 [including] further comprising:

prompting the user to locate data fields on a document image; and

bounding a data field on the document image for interpretation.

26. (Amended) A method in accordance with Claim 25 [including:] further comprising paying a bill from the machine and an inserted check.

27. (Amended) A method in accordance with Claim 26 [including:] further comprising prompting the user to enter the amount of the bill and amount to be paid from a check with a remainder of the check amount being dispensed to the user in cash.

28. (Amended) A method in accordance with Claim 27 [including:] further comprising interpreting a user's account number printed on the bill[;], the amount due[;], and the date of the bill.

29. (Amended) A method in accordance with Claim 16 [including the step of:] further comprising:

writing change onto a card in addition to dispensing cash.

Sub D
30. (Amended) A method for handling documents and for dispensing cash to a user from a machine without a teller, [said method] comprising:

inserting a card having an identification password associated therewith for identifying the user as a qualified user into the machine;

receiving a document inserted by user into the machine in exchange for which cash is expected to be dispensed;

scanning the inserted document;
displaying a scanned image from the document to the machine user;
manually entering by the user into the machine an amount relative to the document;
machine interpreting a courtesy amount recognition [line] field (CAR) and a legal amount recognition [line] field (LAR) from the second document image;
and matching the amount entered by the machine user to the interpreted LAR and CAR amounts;
determining a confidence level;
comparing the confidence level to a threshold to determine if it is sufficient to validate the document and to cause a dispensing of cash; and
dispensing cash from the machine after qualifying the user and after validating the document.

31. (Amended) A method in accordance with Claim 30 [including] further comprising:

taking biometric data from the user at the machine; and
evaluating the biometric data from the user against stored biometric data relative to the user for qualifying the user prior to dispensing cash to the user.

32. (Amended) An automated machine for an automated document handling system for making bank deposits with a monetary document comprising:

a card receiver for receiving a card having an intelligence associated therewith for identifying the user as a qualified user;

a document receiver in the machine for receiving the monetary document inserted by the system user into the machine from which a deposit is being made;

a document scanner for scanning the received document;

a processor for receiving the document scanner input and generating an image thereof;

a display device coupled to the processor for displaying [an] the image from the scanned monetary document to the system user;

an entering device coupled to the processor for the system user to enter an amount to be deposited;

the processor reviewing images from a legal amount recognition [line] (LAR) field and a courtesy amount recognition [line] (CAR) field for a confidence level for acceptance of the user-entered amount;

the processor ascertaining if an apparent signature from the document image is on the signature line of the document image in order to validate the document; and

an acceptance of deposit indicator operable by the processor after qualification of the user and validity of the document to indicate proof of deposit to the system user.

33. (Amended) A machine in accordance with Claim 32 further comprising[:] a MICR reader for reading a MICR amount [line] field on the document and comparing the amount entered by the user to the amount read by the MICR reader.

34. (Amended) A machine in accordance with Claim 32 [wherein] further comprising a locating device [is provided to define] for defining coordinates on the image, [and] the locating device [is] being operable by the user to locate areas on the document image for the processor to review.

35. (Amended) A machine in accordance with Claim 32 wherein the display device comprises a touch screen and the user touches the touch screen at areas on the document image for one or more of the CAR [line] field, the LAR [line] field, a date

[line] field, a MICR [line] field, a name [line] field and an address [line] field.

36. (Amended) A machine in accordance with Claim 35 wherein the processor comprises an arbitrator for comparing results from an analysis of the CAR [line] field, the LAR [line] field, and the user-entered amount.

37. (Twice Amended) A machine in accordance with Claim 32 further comprising ICR engines that specialize in recognition of a particular portion of the document image;

a CAR engine that provides confidence levels with respect to the CAR [line] field; and

a LAR engine that provides confidence levels with respect to the LAR [line] field.

38. (Amended) A method of making bank deposits with a monetary transaction document in an automated system without the use of a teller, the method comprising [the steps of]:

providing an automated machine having a card receiver for receiving a card having an intelligence associated therewith for identifying the user as a qualified user;

inserting a monetary transaction document into the automated machine;

scanning the received monetary transaction document and generating an image therefrom;

displaying an image from the scanned monetary transaction document to the system user;

entering an amount by the user into the machine, which amount is to be deposited;

reviewing images from a legal amount recognition [line] (LAR) field and from a courtesy amount recognition [line] (CAR) field and reviewing the user-entered amount in a processor to provide a confidence level;

ascertaining if an apparent signature from the document image is on the signature line of the document image in order to validate the document; [;] and

providing an acceptance of deposit to the user operable by the processor after qualification of the user and an acceptable confidence level with respect to the document.

39. (Amended) A method in accordance with Claim 38 further comprising [the further step of:] reading a MICR amount [line] field on the document and reviewing the amounts entered by the user and read by a MICR reader to ascertain if a sufficient confidence level is present.

40. (Amended) A method in accordance with Claim 38 [including the] further comprising [step of:] defining coordinates on the image by user and locating areas on the monetary transaction document image for the processor to review.

41. (Amended) A method in accordance with Claim 38 [including the] further comprising [step of]:

providing a touch screen, touching the screen at areas on the document image for one or more of the CAR [line] field, the LAR [line] field, the date [line] field, the MICR [line] field, the name [line] field and the address field [line].

42. (Amended) A method in accordance with Claim 41 [including the] further [step of] comprising arbitrating results from an analysis of the CAR [line] field, the LAR [line] field, and the user-entered amount.

43. (Amended) A method in accordance with Claim 38 [including the step of] further comprising:

using ICR engines that specialize in recognition of a particular portion of the document image;

using a CAR engine that provides confidence levels with respect to the CAR [line] field; and

using a LAR engine that provides confidence levels with respect to the LAR [line] field.

44. (Amended) A method in accordance with Claim 38 [including the step of] further comprising:

reviewing a MICR [line] field on the monetary transaction document image; and

reviewing a date on the monetary transaction document image for meeting rules with respect to antedating or post-dating.

45. (Amended) A method in accordance with Claim 38 [including the step of] further comprising:

dispensing in cash a portion of the amount to the user from the amount being deposited; and

writing any change from the portion being dispensed onto a card of the user.

47. (Amended) A system in accordance with Claim 46 wherein[:] the document being cashed [is] comprises a money order.

48. (Amended) A system in accordance with Claim 46 wherein[:]

the transaction [is] comprises payment of a bill from a provider;

the device for interpreting the amount [includes] comprises a scanner to scan [the] a provider's account number and [the] a user's identification from the [bill] monetary transaction document.

49. (Amended) A system in accordance with Claim 48 wherein[:] the cash receiver adds [the] a plurality of cash bills

received and forwards signals representing the total cash being deposited; and further comprising a comparator that compares the cash being deposited relative to the amount scanned from the bill by the scanner to ascertain if the total cash covers the bills and a transaction fee.

52. (Amended) A method in accordance with claim 50 further comprising:

paying a bill by inserting [the] a bill into the machine;
ascertaining the bill provider's account number and user's identification account number from the bill; and
sending signals over a network to cause a transfer of funds to the account of the bill provider.

53. A method in accordance with Claim 50 further comprising:

recording the transaction on a storage medium; and
issuing a receipt to the user with a receipt printer.

54. (Amended) A method in accordance with Claim 50 further comprising:

generating change between the amount of transaction and the amount of cash or the amount written on through the medium; and
[further comprising] writing change onto a card for the user.

57. (Amended) A method in accordance with Claim 55 [including the step of] further comprising:

displaying on a display screen various transactional options; and
manually selecting one transaction to be performed from the list of transactional options available to the user.

58. (Amended) A method in accordance with Claim 55 wherein the document [is] comprises a check and further comprising:

reading the magnetic ink character recognition data with respect to the bank issuing the check; and

communicating through the communication network to the identified bank.

59. A method in accordance with Claim 55 wherein the document being received is a money order, and further comprising examining a cursive signature on the back of the money order prior to validation and dispensing of any cash to the user.

60. (Amended) A method in accordance with Claim 55 wherein the user has selected a bill paying operation and the monetary translation document is a bill document further comprising:

receiving the bill document;

scanning the bill document for the amount due to the provider;

communicating the modem to the bill issuer's bank account the amount of payment being made by the user;

generating a receipt showing an amount paid for the bill to the user;

storing the bill in a storage device; and

providing a transactional tag with respect to the bill so that the transaction can be later reviewed, if necessary.

61. A method in accordance with Claim 55 further comprising:

storing money order blanks in the machine;

generating signals to cause a printer to print the amount to be paid on the money order; and

dispensing the printed money order to the machine user.

62. (Amended) A method in accordance with Claim 55 [including the step of] further comprising:

performing a biometric analysis of a biometric characteristic of the user relative to a previously stored biometric characteristic of the user for qualifying the user.

63. (Amended) A method in accordance with Claim 55 [including the step of] further comprising:

prompting the user to provide a bounding box about a scanned portion of the monetary transaction document.

64. (Amended) A method in accordance with Claim 63 [including the step of] further comprising:

touching a touch screen in response to a [prompting] prompt.

65. (Amended) A method in accordance with Claim 64 [including the step of] further comprising:

magnifying date within the boundary box to aid in elimination of unwanted data.

67. (Amended) A system in accordance with Claim 66 wherein[:]

the boundary device includes a user operated magnification to magnify the data in a bounding box.

68. (Amended) A method in accordance with Claim 67 wherein[:]

a touch screen is touched by the user to create the bounding box and to magnify the data in the bounding box.

69. (Amended) A system for automatic cashing of checks or making remittance transactions without the aid of bank teller or the like, comprising:

an automated machine for receiving a document having data thereon for the transaction;

a scanning device in the automated machine for scanning the document and providing an image from the document to the user;

a user validator for validating the user with a security confidence level;

a document validator for validating the document with a security confidence level;

a manual entry device operable by the user to enter an amount with respect to the document and the transaction to be performed;

a cash dispenser associated with the machine for dispensing cash when the user and document have sufficient security confidence levels; and

a card writing device for adding a change amount onto a card to complete the transaction.

70. (Amended) [An apparatus] A system in accordance with Claim 69 wherein the cash dispenser comprises bins for holding only cash of certain large denominations; and

a processor in the system causes the dispensing of large denominations of cash from the bins and a dispensing of the card after writing the smaller change amount on the card.

71. (Amended) A system for automatic cashing of checks or making remittance transactions without the aid of bank teller or the like, comprising:

an automated machine for receiving a document having data thereon for the transaction;

a scanning device in the automated machine for scanning the document and providing an image from the document to the user;

a user validator for validating the user with a security confidence level;

a document validator for validating the document with a security confidence level;

a manual entry device operable by the user to enter an amount with respect to the document and the transaction to be performed;

a cash dispenser associated with the machine for dispensing cash when the user and document have sufficient security confidence levels; and

the validator for the user includes a biometric device for analysis of a biometric characteristic of the user.

72. (Amended) [An apparatus] A system in accordance with claim 71 wherein the validator for the document includes an engine for extraction of data at a legal amount recognition line (LAR) and an engine for extraction of data at a courtesy amount recognition line (CAR) to provide security confidence levels that CAR and LAR match one another.

73. (Amended) A system for automatic cashing of checks or making remittance transactions without the aid of bank teller or the like, comprising:

an automated machine for receiving a document having data thereon for the transaction;

a scanning device in the automated machine for scanning the document and providing an image from the document to the user;

a user validator for validating the user with a security confidence level;

a document validator for validating the document with a security confidence level;

a manual entry device operable by the user to enter an amount with respect to the document and the transaction to be performed;

a cash dispenser associated with the machine for dispensing cash when the user and document have sufficient security confidence levels; and

a MICR device for analysis of a MICR [line] field with respect to the amount of a payroll check being cashed; and

a document validator comprises a device for analysis of the check issuer's account number as authorized account.

74. (Amended) A system in accordance with Claim 73 wherein the document validator comprises a MICR reader to detect that the MICR [line] field is written with magnetic material.

75. (Amended) A method for automatic cashing of checks or making remittance transactions without the aid of bank teller or the like, comprising [the steps of]:

providing an automated machine for receiving a document having data thereon for the transaction and a processor for the system;

scanning the document and providing an image from the document to the user;

validating with the processor that the user has a sufficient security confidence level;

validating with the processor the document as having a sufficient security confidence level;

operating a manual entry device at the machine to enter an amount with respect to the document and the transaction to be performed; and

bounding data on the transaction document by operations of the user to locate data for the processor for an automatic analysis by the processor; and

dispensing cash when the user and document have validated security confidence levels.

76. (Amended) A method, in accordance with Claim 75, [including the step of:] further comprising:
magnifying the data in the bounding box.

77. (Amended) A method in accordance with Claim 76 [including the step of:] further comprising:

touching a touch screen to create the bounding box and to magnify the data in the bounding box.

78. (Amended) A method for automatic cashing of checks or making remittance transactions without the aid of bank teller or the like, comprising [the steps of]:

providing an automated machine for receiving a document having data thereon for the transaction and a processor for the system;

scanning the document and providing an image from the document to the user;

validating with the processor that the user has a sufficient security confidence level;

validating with the processor the document as having a sufficient security confidence level;

operating a manual entry device at the machine to enter an amount with respect to the document and the transaction to be performed; and

dispensing cash when the user and document have validated security confidence levels in bills of certain denominations; and

writing change on a card of the user to complete the cash transaction.

79. (Amended) A method in accordance with Claim 78 wherein the cash dispenser comprises bins for holding only cash of certain large denominations; and [including the step of:] further comprising:

operating the processor to cause a dispensing of the large denominations of cash from the bins; and

dispensing of the card from the machine after writing the smaller change amount on the card.

80. (Amended) A method for automatic cashing of checks or making remittance transactions without the aid of bank teller or the like, comprising [the steps of]:

providing an automated machine for receiving a document having data thereon for the transaction and a processor for the system;

scanning the document and providing an image from the document to the user;

validating with the processor that the user has a sufficient security confidence level;

validating with the processor the document as having a sufficient security confidence level;

operating a manual entry device at the machine to enter an amount with respect to the document and the transaction to be performed; and

analyzing a biometric characteristic of the user as part of the validation of the user; and

dispensing cash when the user and document have validated security confidence levels.

81. (Amended) A method in accordance with claim 80 including the steps of:

using an engine for extraction of data at a legal amount recognition [line] field (LAR) and using an engine for extraction of data at a courtesy amount recognition [line] field (CAR) to provide security confidence levels that CAR and LAR match one another.

82. (Amended) A method for automatic cashing of checks issued by a previously authorized issuer entity without the aid of bank teller or the like, comprising [the steps of]:

providing an automated machine for receiving a document having data thereon for the transaction and a processor for the system;

scanning the document and providing an image from the document to the user;

validating with the processor that the user has a sufficient security confidence level;

validating with the processor the document as having a sufficient security confidence level;

operating a manual entry device at the machine to enter an amount with respect to the document and the transaction to be performed; and

reading a MICR [line] field to establish the cash amount of the monetary transaction document generated by the authorized issuer;

analyzing the issuer's account number as being an authorized account for the issuer entity; and

dispensing cash when the user and document have validated security confidence levels.

83. (Amended) A method in accordance with Claim 82 comprising:

detecting that the MICR [line] field is written with magnetic material.

84. (Amended) A method for automatic handling of checks without the aid of bank teller or the like, comprising:

providing an automated machine for receiving a document having data thereon for the transaction and a processor for the system;

scanning the document to produce a document image and dissecting the image;

entering [the check] the document amount by the user;

validating with a processor that the user has a sufficient security confidence level;

performing several field evaluations from the dissected image with respect to the amount of the [check] document;

making a list of amount results ranked by confidence level from a plurality of field evaluations;
providing rules for arbitration of the check transaction;
arbitrating a transaction in response to the [user- entered] user-entered [check] document amount and the respective field amount results using the rules; and
performing the transaction when the transaction arbitration has been satisfied.

85. (Amended) A method in accordance with Claim 84 wherein performing several field evaluations includes:

extracting a dissected image of a legal amount recognition [line] field (LAR) and
extracting a dissected image of a courtesy amount recognition [line] field (CAR).

86. (Amended) A method in accordance with Claim 84 further comprising:

making a remittance transaction with the [check] document;
dissecting an image of an associated remittance document;
making a list of amount results ranked by confidence level with respect to the amount on the associated remittance document; and

providing the amount results of the associated remittance document for arbitration prior to making the remittance transaction.

87. (Amended) A method in accordance with Claim [85] 84 wherein performing the transaction comprises [the step of]:

making a deposit in the user's account.

88. (Amended) A method in accordance with Claim 84 wherein making several field evaluations comprises:

optically recognizing a MICR [line] field amount; and

extracting a dissected image of a date amount recognition line.

89. (Amended) A method in accordance with Claim [85] 84 wherein the arbitration step comprises:

inputting a CAR recognition result into a weighted confidence algorithm for the CAR;

comparing the result of the weighted confidence algorithm with a CAR threshold value;

inputting a LAR recognition result into a weighted confidence algorithm for the LAR; and

comparing the result of the weighted confidence algorithm for the LAR with a CAR threshold value.

90. (Amended) A method in accordance with Claim 84 comprising:

magnetically recognizing a MICR [line] field on the [check] document to establish that the MICR [line] field is written with magnetic material; and

performing a date amount recognition.

Please add the following claims:

91. An automated machine for an automated document handling system for dispensing cash to a system user comprising:

a document scanner for scanning a received document;

a processor for receiving the document scanner input and generating an image thereof;

a display device coupled to the processor for displaying an image from the scanned document to the system user;

an entering device coupled to the processor for the system user to enter an amount relative to the amount on the document;

wherein the processor ascertains if an apparent signature from the document image is on the signature line of the document image in order to validate the document; and

a cash dispenser coupled to the processor operable after the user has been qualified and the document has been validated by the processor to dispense cash automatically to the system user.

92. An automated machine for an automated document handling system for dispensing cash to a system user comprising:

a document scanner for scanning a received document;

a processor for receiving the document scanner input and generating an image thereof;

a display device coupled to the processor for displaying an image from the scanned document to the system user;

an entering device coupled to the processor for the system user to enter an amount relative to the amount on the document;

wherein the processor ascertains a monetary amount on the document image; and

a cash dispenser coupled to the processor operable after the user has been qualified and the document has been validated by the processor to dispense cash automatically to the system user.

93. An automated machine for an automated document handling system according to claim 92 wherein a bounding box is displayed on the screen and may be manipulated by a user to identify fields of information to be processed.

94. ~~Apparatus for handling a monetary transaction document comprising:~~

~~an input for receiving a transaction document image;~~

~~a processor for processing the monetary transaction document image and determining whether a valid courtesy amount recognition has been presented;~~

~~an output device receiving a signal from the processor to complete a monetary transaction.~~

DWJ 95. Apparatus according to claim 94 wherein the processor signals the output device to pay out cash.

BS 96. Apparatus according to claim 94 wherein the processor signals the output device to pay a bill electronically.

97. Apparatus according to claim 94 wherein the processor signals the output device to vend an article of commerce.

98. Apparatus according to claim 94 wherein the processor detects a legal amount recognition field prior to issuing a transaction verification.

99. Apparatus according to claim 94 wherein the processor detects the presence of a magnetic ink character recognition field and issues a transaction verification in response thereto.

100. Apparatus according to claim 94 wherein the processor detects the presence of a signature and provides a transaction verification therefrom.

101. Apparatus according to claim 94 wherein the processor detects a legal amount recognition field and the MICR field and issues a transaction verification.

102. Apparatus according to claim 94 wherein the processor detects the presence of a signature, detects the presence of a legal amount recognition field and issues a transaction verification signal as a result thereof.

add
D3